

II. Amendments to the Claims

This listing of claims replaces without prejudice all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) ~~An~~ A water treatment ultraviolet ~~optical~~ radiation sensor device for detecting ultraviolet radiation from a plurality of submerged ultraviolet radiation sources disposed in a predefined arc around the sensor device in a radiation field, the device comprising:

a radiation collector configured to (i) receive ultraviolet ~~for receiving~~ radiation from a the plurality of submerged ultraviolet radiation sources disposed in the predefined arc around the sensor device ~~collector~~ within the radiation field, and (ii) redirect ~~redirecting~~ the received radiation along a predefined pathway; and

a sensor element configured to detect and respond ~~capable of detecting and responding~~ to incident radiation along the pathway.

Claim 2 (Currently Amended) The ~~optical~~ sensor device defined in claim 1, wherein the predefined arc comprises

a substantially 360° arc.

Claim 3 (Currently Amended) The ~~optical~~ sensor device defined in claim 1, wherein the predefined arc comprises at least one arc less than 360°.

Claim 4 (Currently Amended) The ~~optical~~ sensor device defined in claim 1, wherein the predefined arc comprises two or more independent arcs less than 360°.

Claim 5 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector comprises a distal surface having a generally concave shape and further comprises a reflective surface to reflect the incident radiation along the pathway.

Claim 6 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector comprises a distal surface having a generally convex shape which refracts and reflects the incident radiation along the pathway.

Claim 7 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector is directly mounted to the sensor element.

Claim 8 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector is remote from the radiation sensor.

Claim 9 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector has a polygonal cross-section.

Claim 10 (Currently Amended) The ~~optical~~ sensor device defined in ~~any one of~~ claim 1, wherein the radiation collector has a generally circular cross-section.

Claim 11 (Currently Amended) A water treatment ultraviolet radiation source module comprising:

a frame having a first support member and configured to be disposed in water;

at least one radiation source assembly extending from and in engagement with said a first support member, the at least one radiation source assembly comprising (i) at least one

ultraviolet radiation source, and (ii) a radiation sensor device comprising:

a radiation collector configured to receive ultraviolet ~~for receiving~~ radiation from a plurality of ultraviolet radiation sources disposed in the water in a predefined arc around the collector, ~~within the field~~ and to redirect ~~redirecting~~ the received ultraviolet radiation along a predefined pathway; and

a sensor element configured to detect and respond ~~capable of detecting and responding~~ to incident ultraviolet radiation redirected along the pathway.

Claim 12 (Original) The radiation source module defined in claim 11, wherein the predefined arc comprises a substantially 360° arc.

Claim 13 (Original) The radiation source module defined in claim 11, wherein the predefined arc comprises at least one arc less than 360°.

Claim 14 (Original) The radiation source module defined in claim 11, wherein the predefined arc comprises two or more independent arcs less than 360°.

Claim 15 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein said ~~the~~ at least one ultraviolet radiation source is disposed within a protective sleeve.

Claim 16 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector comprises a distal surface having a generally concave shape and further comprises a reflective surface to reflect the incident radiation along the pathway.

Claim 17 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector comprises a distal surface having a generally convex shape which refracts and reflects the incident radiation along the pathway.

Claim 18 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector is directly mounted to the sensor element.

Claim 19 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector is remote from the radiation sensor.

Claim 20 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector has a polygonal cross-section.

Claim 21 (Currently Amended) The radiation source module defined in ~~any one of~~ claim 11, wherein the radiation collector has a generally circular cross-section.

22. (Currently Amended) A water treatment ultraviolet radiation source assembly comprising:

a protective sleeve configured to be disposed in the water to be treated, said protective sleeve containing:

(i) at least one ultraviolet radiation source configured to treat the water, and

(ii) a radiation sensor device configured to detect ultraviolet ~~for detecting~~ radiation in a field in the water to be treated, the sensor device comprising:

a radiation collector configured to (i) receive ultraviolet ~~for receiving~~ radiation from a predefined arc around the collector within the field, and (ii) redirect ~~redirecting~~ the received ultraviolet radiation along a predefined pathway; and

a sensor element configured to detect and respond to ~~capable of detecting and responding~~ to incident ultraviolet radiation along the pathway.

Claim 23 (Original) The radiation source assembly defined in claim 22, wherein the predefined arc comprises a substantially 360° arc.

Claim 24 (Original) The radiation source assembly defined in claim 22, wherein the predefined arc comprises at least one arc less than 360°.

Claim 25 (Original) The radiation source assembly defined in claim 22, wherein the predefined arc comprises two or more independent arcs less than 360°.

Claim 26 (Currently Amended) The radiation source assembly defined in ~~any one of~~ claim 22, wherein the radiation collector comprises a distal surface having a generally concave shape and further comprises a reflective surface to reflect the incident radiation along the pathway.

Claim 27 (Currently Amended) The radiation source assembly defined in ~~any one of~~ claim 22, wherein the radiation

collector comprises a distal surface having a generally convex shape which refracts and reflects the incident radiation along the pathway.

Claim 28 (Currently Amended) The radiation source assembly defined in ~~any one of~~ claim 22, where the radiation collector is directly mounted to the sensor element.

Claim 29 (~~Previously Presented~~) The radiation source assembly defined in ~~any one of~~ claim 22, wherein the radiation collector is remote from the radiation sensor.

Claim 30 (Currently Amended) The radiation source assembly defined in ~~any one of~~ claim 22, wherein the radiation collector has a polygonal cross-section.

Claim 31 (Currently Amended) The radiation source assembly defined in ~~any one of~~ claim 22, wherein the radiation collector has a generally circular cross-section.

Claim 32 (Currently Amended) An ultraviolet water
~~A fluid~~ treatment system comprising:

an array of ultraviolet radiation sources configured
to generate ~~for generating~~ a field of ultraviolet radiation in in

the water to be treated, the array of ultraviolet radiation sources further comprising:

a radiation sensor device configured to detect ~~for detecting~~ ultraviolet radiation in the field of ultraviolet radiation in the water to be treated, the sensor device comprising:

a radiation collector configured to (i) receive ultraviolet ~~for receiving~~ radiation from a predefined arc around the collector within the field of ultraviolet radiation in the water to be treated, and (ii) redirect ~~redirecting~~ the received ultraviolet radiation along a predefined pathway; and

a sensor element configured to detect and respond to the redirected ultraviolet ~~capable of detecting and~~ ~~responding to incident~~ radiation along the pathway.

Claim 33 (Original) The fluid treatment system defined in claim 32, wherein the predefined arc comprises a substantially 360° arc.

Claim 34 (Original) The fluid treatment system defined in claim 32, wherein the predefined arc comprises at least one arc less than 360°.

Claim 35 (Original) The fluid treatment system defined in claim 32, wherein the predefined arc comprises two or more independent arcs less than 360°.

Claim 36 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector comprises a distal surface having a generally concave shape and further comprises a reflective surface to reflect the incident radiation along the pathway.

Claim 37 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector comprises a distal surface having a generally convex shape which refracts and reflects the incident radiation along the pathway.

Claim 38 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector is directly mounted to the sensor element.

Claim 39 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector is remote from the radiation sensor.

Claim 40 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector has a polygonal cross-section.

Claim 41 (Currently Amended) The fluid treatment system defined in ~~any one of~~ claim 32, wherein the radiation collector has a generally circular cross-section.

III. Amendments to the Drawings

The attached new drawing sheet contains a new Figure 4 taken from U.S. Patent No. 6,646,269, discussed in the detailed description of the subject application. No new matter has been added.